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DATE OF PREPARATION:

8-11-87

EMERGENCY PHONE NO: (818) 579-6270

VOC: 265 Grams/ Liter

PRODUCT FORMULA: 3-1H-1

NFPA:

PRODUCT NAME: Urafilm Hardener

Health

PRODUCT CHEMICAL FAMILY: Aliphatic Polyisocyanate

Flammability

Reactivity

[illegible]

BOILING POINT: 258.8°F

VAPOR DENSITY (AIR = 1): HEAVIER

SOLUBILITY IN WATER: NEGLIGIBLE

VAPOR PRESSURE: @20°C 9.5 mm.Hg.

SPECIFIC GRAVITY: 1.06

% VOLATILE BY VOLUME: 30%

EVAPORATION RATE: Faster
(BUTYL ACETATE = 1)

FLASH POINT: 91 °F. TCC LEL: 1.0 % by Volume UEL: 7.6 % By Volume

EXTINGUISHING MEDIA: Foam, Dry Chemical, CO² and/or Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS:

During a fire, irritating and toxic gases and smoke are present from decomposition. Isolate from heat, sparks and open flames. Closed containers may burst when exposed to extreme heat. Vapors form an explosive mixture in air between the upper and lower explosive limits.

SPECIAL FIREFIGHTING PROCEDURES: Full emergency equipment with self-contained breathing apparatus should be worn by firefighters.

BOE-C6-0226862

Refer to Patty's Industrial Hygiene and Toxicology, Volume I (3rd edition) Chapter 17 and Volume II (1st edition) Chapter 3 for guidance concerning appropriate air sampling strategy to determine airborne concentration.

Other - Safety showers and eyewash stations should be available. Educate and train employees in safe use of the product. Follow all label instructions.

VIII. Reactivity Data

Stability - Stable under normal conditions.

Polymerization - None under normal conditions.

Incompatibility (Material to Avoid) - Avoid contact with water, alcohols, amines, strong bases, metal compounds or surface active agents.

Contains trimethylol containing materials.

Conditions to Avoid - Contact with moisture and other materials which react with isocyanates. Temperature above maximum storage temperature.

Hazardous Decomposition Products - By fire: CO², CO, oxides of nitrogen, traces of HCN and TDI.

Steps to be taken in case material is released or spilled: evacuate non-essential personnel. Remove all sources of ignition: ventilate the area. Equipment clean-up crew with appropriate protective equipment (ie; clothing, respiratory, etc. See employee protection recommendation Part VII). Dike or impound spilled material and control further spillage if feasible. Notify appropriate authorities if necessary. Cover spill with sawdust, vermiculite or other absorbent material, pour liquid decontaminant over spillage and allow to react at least 10 minutes. Collect material in open containers and add further amounts of decontamination solution. Remove containers to safe place. Cover loosely. Wash down area with liquid decontaminant and flush spill area with water.

Decontamination Solutions: Ammonium hydroxide (0 - 10%), detergent (2 - 5%) and balance water.

Waste Disposal Method: Waste material must be disposed of in accordance with federal, state and local environmental control regulations.

Empty containers must be handled with care due to product residue and combustible solvent vapor. Decontaminate containers prior to disposal. Do not heat or cut empty container with electric or gas torch. (See Sections IV & VIII)

IX. Special Precautions & Storage Data

Storage Temperature - (min./max.) 32°F. (0°C.) / 122°F. (50°C.)

Average Shelf Life - One year at 77°F. (25°C)

Special Sensitivity (heat, light, moisture) - if container is exposed to extreme heat container can pressurize and burst. If moisture enters container, pressure can build up due to reaction producing CO², which can cause sealed container to burst. Do not reseal if contamination is suspected.

Precautions to be taken in handling and storing. Keep away from heat, sparks and open flame. Store in tightly closed container and protect from moisture and foreign materials. At maximum temperature noted, material may slowly polymerize without hazard. Ideal storage temperature is 50 - 81°F. (10 - 27°C)

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V. Health Effects Data

Animal Toxicity - Respiratory effects (Mice) - Sensory and pulmonary irritation. (Polyisocyanate)
Ames Test - Negative (Polyisocyanate)

Human Effects to Overexposure

Vapors and Mist: May cause irritation to skin, eyes and respiratory tract (nose, throat and lungs). Symptoms may be watering of eyes, dryness of throat, coughing, headache, tightness in chest or burning sensation, dizziness or nausea. Respiratory sensitivity may result in asthma-like symptoms. Skin sensitivity may result in allergic dermatitis, including rash, itching, hives and swelling of extremities.

VI. Emergency and First Aid Procedures

Eye Contact - Flush with clean water (low pressure) for at least 15 minutes, occasionally lifting eyelids. Obtain medical attention.
Skin Contact - Remove contaminated clothing and wash before re-use. Wash affected area with soap and water.
Inhalation - Move to an area free from further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention.
Ingestion - Consult physician. DO NOT INDUCE VOMITING.

VII. Employee Protection Recommendations

Eye Protection - Safety glasses, splash goggles or face shields. Contact lenses should not be worn.
Skin Protection - Chemical resistant gloves, such as neoprene, hypalons, etc. Cover as much as the exposed area as possible with appropriate clothing. If skin creams are used, keep the area covered to a minimum.
Respiratory Protection - Use respirators that are approved for use in isocyanate containing environments, (air purifying or fresh air supplied). In spray application, you must protect against exposure to both vapor and spray mist. Observe OSHA regulations for respiratory use 29CFR 1910.134. When the airborne isocyanate monomer concentrations are known to be below 0.2 ppm and if the polyisocyanate (polymeric oligomer) concentrations are known to be below 10 mg/m³, a properly fitted air purifying (combination organic vapors and particulate) respirator, proven by test to be effective in isocyanate, containing spray paint environments, will provide sufficient protection.

When the airborne isocyanate concentrations are not known, or if the above guidelines are exceeded, or if spraying is performed in a confined area or area with limited ventilation, the use of a positive pressure supplied air respirator is mandatory.

Even during non-spray operations, such as mixing, brush or roller application, etc., it is possible to be exposed to airborne solvent or isocyanate vapors. Therefore, when airborne concentrations during non-spray operations exceed the TLV of 0.02 ppm for isocyanate monomer, but below 0.2 ppm, at least an air purifying (organic vapor) respirator is required. Solvent concentrations should be also considered when determining the selection and use of a respirator.

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